

# ***Bloodborne Pathogens***



# Introduction

- Approximately 5.6 million workers in health care and other facilities are at risk of exposure to bloodborne pathogens such as human immunodeficiency virus (HIV – the virus that causes AIDS), the hepatitis B virus (HBV), and the hepatitis C virus (HCV)
- OSHA's Bloodborne Pathogens standard prescribes safeguards to protect workers against the health hazards from exposure to blood and other potentially infectious materials, and to reduce their risk from this exposure

# Who is covered by the standard?

- ▮ All employees who could be “reasonably anticipated” as the result of performing their job duties to face contact with blood and other potentially infectious materials
- ▮ “Good Samaritan” acts such as assisting a co-worker with a nosebleed would not be considered occupational exposure

# Some Workers Who are at Risk

- ▮ Physicians, nurses and emergency room personnel
- ▮ Orderlies, housekeeping personnel, and laundry workers
- ▮ Dentists and other dental workers
- ▮ Laboratory and blood bank technologists and technicians
- ▮ Medical examiners
- ▮ Morticians
- ▮ Law enforcement personnel
- ▮ Firefighters
- ▮ Paramedics and emergency medical technicians
- ▮ Anyone providing first-response medical care
- ▮ Medical waste treatment employees
- ▮ Home healthcare workers

# How does exposure occur?

- ▮ Most common: needlesticks
- ▮ Cuts from other contaminated sharps (scalpels, broken glass, etc.)
- ▮ Contact of mucous membranes (for example, the eye, nose, mouth) or broken (cut or abraded) skin with contaminated blood

# Exposure Control Plan

- ▢ Identifies jobs and tasks where occupational exposure to blood or other potentially infectious material occurs
- ▢ Describes how the employer will:
  - ▢ Use engineering and work practice controls
  - ▢ Ensure use of personal protective equipment
  - ▢ Provide training
  - ▢ Provide medical surveillance
  - ▢ Provide hepatitis B vaccinations
  - ▢ Use signs and labels

# Exposure Control Plan

- ❑ Written plan required
- ❑ Plan must be reviewed at least annually to reflect changes in:
  - ❑ tasks, procedures, or assignments which affect exposure, and
  - ❑ technology that will eliminate or reduce exposure
- ❑ Annual review must document employer's consideration and implementation of safer medical devices
- ❑ Must solicit input from potentially exposed employees in the identification, evaluation and selection of engineering and work practice controls
- ❑ Plan must be accessible to employees

# Universal Precautions

- ▮ Treat all human blood and certain body fluids as if they are infectious
- ▮ Must be observed in all situations where there is a potential for contact with blood or other potentially infectious materials



# Engineering and Work Practice Controls

- ▮ These are the primary methods used to control the transmission of HBV and HIV
- ▮ When occupational exposure remains after engineering and work practice controls are put in place, personal protective equipment (PPE) must be used

# Engineering Controls

These controls reduce employee exposure by either removing the hazard or isolating the worker. Examples:

- ▢ Sharps disposal containers
- ▢ Self-sheathing needles
- ▢ Safer medical devices
  - ▢ Needleless systems
  - ▢ Sharps with engineered sharps injury protections



# Safer Medical Devices

- ▮ *Needless Systems:* a device that does not use needles for the collection or withdrawal of body fluids, or for the administration of medication or fluids
- ▮ *Sharps with Engineered Sharps Injury Protections:* a non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident

# Work Practice Controls

These controls reduce the likelihood of exposure by altering how a task is performed. Examples:

- ▮ Wash hands after removing gloves and as soon as possible after exposure
- ▮ Do not bend or break sharps
- ▮ No food or smoking in work areas



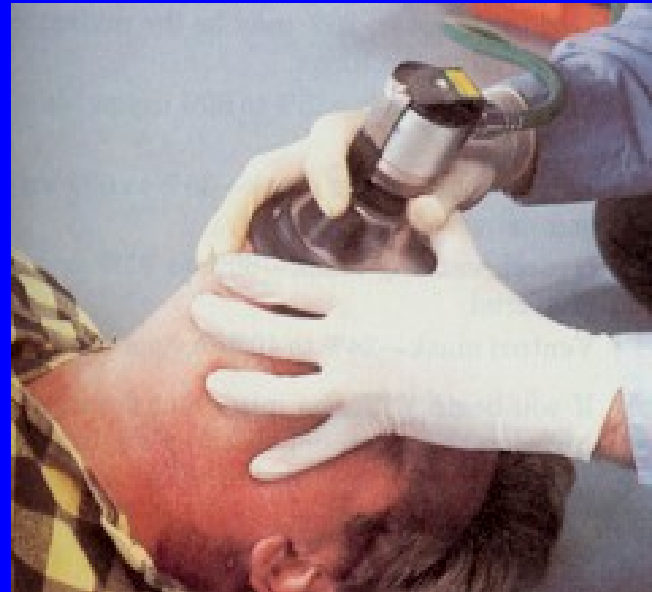
# Personal Protective Equipment

- ❑ Specialized clothing or equipment worn by an employee for protection against infectious materials
- ❑ Must be properly cleaned, laundered, repaired, and disposed of at no cost to employees
- ❑ Must be removed when leaving area or upon contamination



# Examples of PPE

- ☐ Gloves
- ☐ Gowns
- ☐ Face shields
- ☐ Eye protection
- ☐ Mouthpieces and resuscitation devices



# Housekeeping

Must develop a written schedule for cleaning and decontamination at the work site based on the:

- ▢ Location within the facility
- ▢ Type of surface to be cleaned
- ▢ Type of soil present
- ▢ Tasks or procedures being performed

# Housekeeping (cont'd)

Work surfaces must be decontaminated with an appropriate disinfectant:

- ❑ After completion of procedures,
- ❑ When surfaces are contaminated, and
- ❑ At the end of the work shift





# Regulated Waste

Must be placed in closeable, leak-proof containers built to contain all contents during handling, storing, transporting or shipping and be appropriately labeled or color-coded.



# Laundry

- ❑ Handle contaminated laundry as little as possible and use PPE
- ❑ Must be bagged or containerized at location where used
- ❑ No sorting or rinsing at location where used
- ❑ Must be placed and transported in labeled or color-coded containers



# Hepatitis B Vaccination Requirements

- ❑ Must make available, free of charge at a reasonable time and place, to all employees at risk of exposure within 10 working days of initial assignment unless:
  - ❑ employee has had the vaccination
  - ❑ antibody testing reveals immunity
- ❑ The vaccination must be performed by a licensed healthcare professional



# Hepatitis B Vaccination Requirements (cont'd)

- ❑ Must be provided even if employee initially declines but later decides to accept the vaccination
- ❑ Employees who decline the vaccination must sign a declination form
- ❑ Employees are not required to participate in antibody prescreening program to receive vaccination series
- ❑ Vaccination booster doses must be provided if recommended by the U.S. Public Health Service

# What to do if an exposure occurs?

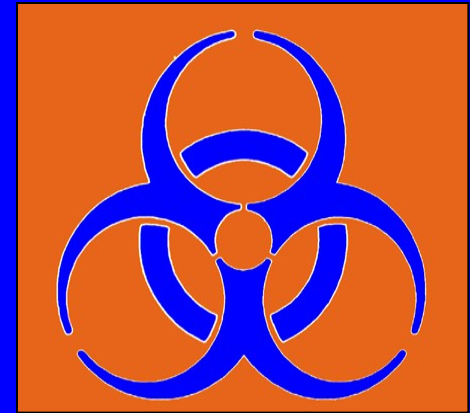
- ❑ Wash exposed area with soap and water
- ❑ Flush splashes to nose, mouth, or skin with water
- ❑ Irrigate eyes with water or saline
- ❑ Report the exposure
- ❑ Direct the worker to a healthcare professional

# Post-Exposure Follow-Up

- ❑ Document routes of exposure and how exposure occurred
- ❑ Record injuries from contaminated sharps in a sharps injury log, if required
- ❑ Obtain consent from the source individual and the exposed employee and test blood as soon as possible after the exposure incident
- ❑ Provide risk counseling and offer post-exposure protective treatment for disease when medically indicated in accordance with current U.S. Public Health Service guidelines
- ❑ Provide written opinion of findings to employer and copy to employee within 15 days of the evaluation

# Biohazard Warning Labels

- ▢ Warning labels required on:
  - ▢ Containers of regulated waste
  - ▢ Refrigerators and freezers containing blood and other potentially infectious materials
  - ▢ Other containers used to store, transport, or ship blood or other potentially infectious materials
- ▢ Red bags or containers may be substituted for labels



# Training Requirements

- ▮ Provide at no cost to employees during working hours
- ▮ Provide at time of initial assignment to a job with occupational exposure and at least annually thereafter
- ▮ Additional training needed when existing tasks are modified or new tasks are required which affect the worker's occupational exposure
- ▮ Maintain training records for 3 years





# Training Elements

- ▮ Copy of the standard
- ▮ Modes of transmission
- ▮ Site-specific exposure control plan
- ▮ Hazard recognition
- ▮ Use of engineering controls, work practices and PPE
- ▮ Live question and answer sessions

# Medical Recordkeeping Requirements

- ❑ Employee's name and social security number
- ❑ Employee's hepatitis B vaccination status
- ❑ Results of examinations, medical testing, and post-exposure evaluation and follow-up procedures
- ❑ Health care professional's written opinion
- ❑ Information provided to the health care professional
- ❑ Employee medical records must be kept confidential and not disclosed or reported without the employee's written consent (unless required by law)
- ❑ Medical records must be maintained for duration of employment plus 30 years according to OSHA's rule governing access to employee exposure and medical records

# Sharps Injury Log

- ❑ Employers must maintain a sharps injury log for the recording of injuries from contaminated sharps
- ❑ The log must be maintained in a way that ensures employee privacy and must contain, at a minimum:
  - ❑ Type and brand of device involved in the incident
  - ❑ Location of the incident
  - ❑ Description of the incident

# Summary

- ▮ OSHA's Bloodborne Pathogens standard prescribes safeguards to protect workers against the health hazards from exposure to blood and other potentially infectious materials, and to reduce their risk from this exposure
- ▮ Implementation of this standard not only will prevent hepatitis B cases, but also will significantly reduce the risk of workers contracting AIDS, Hepatitis C, or other bloodborne diseases